

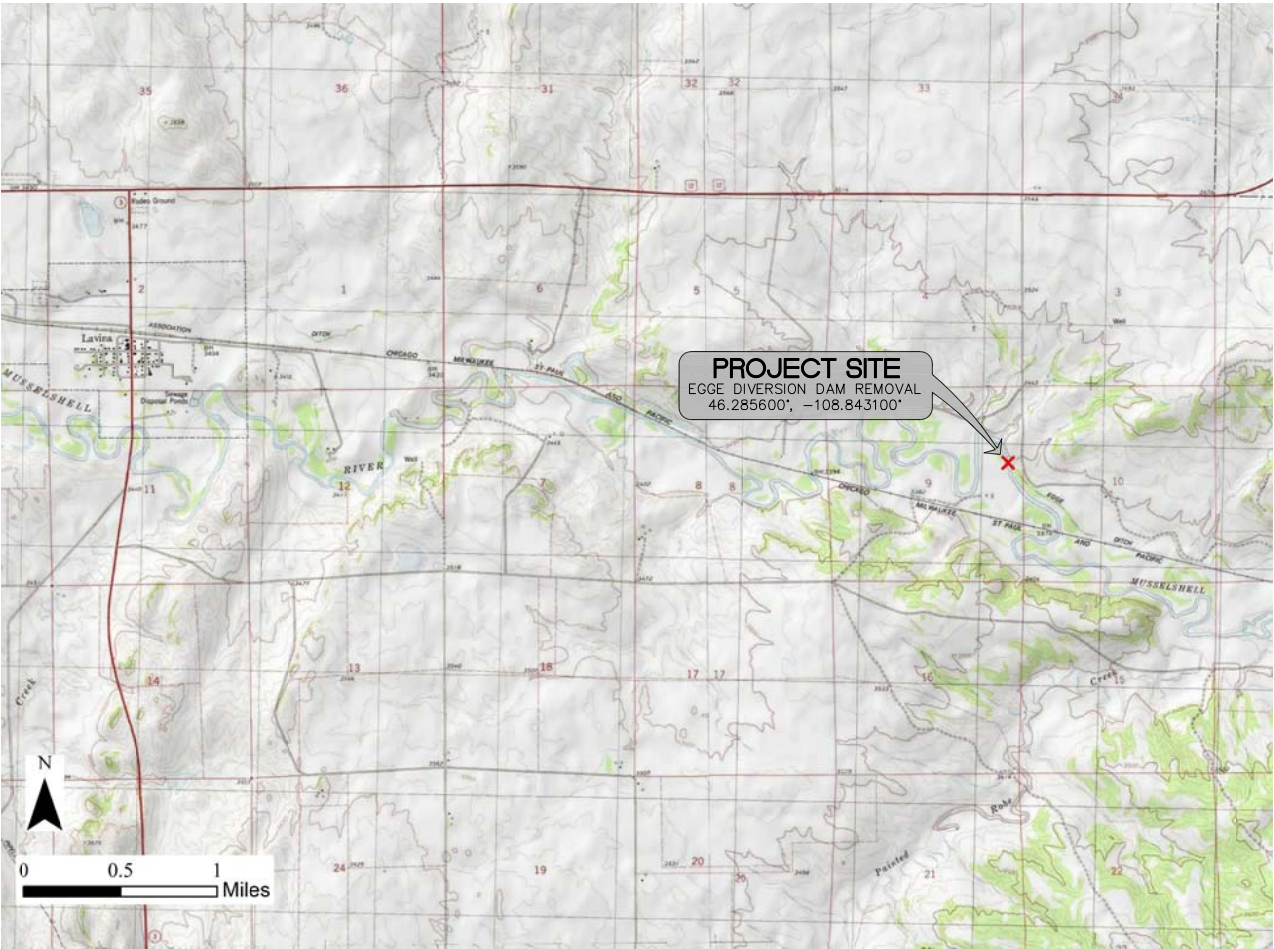
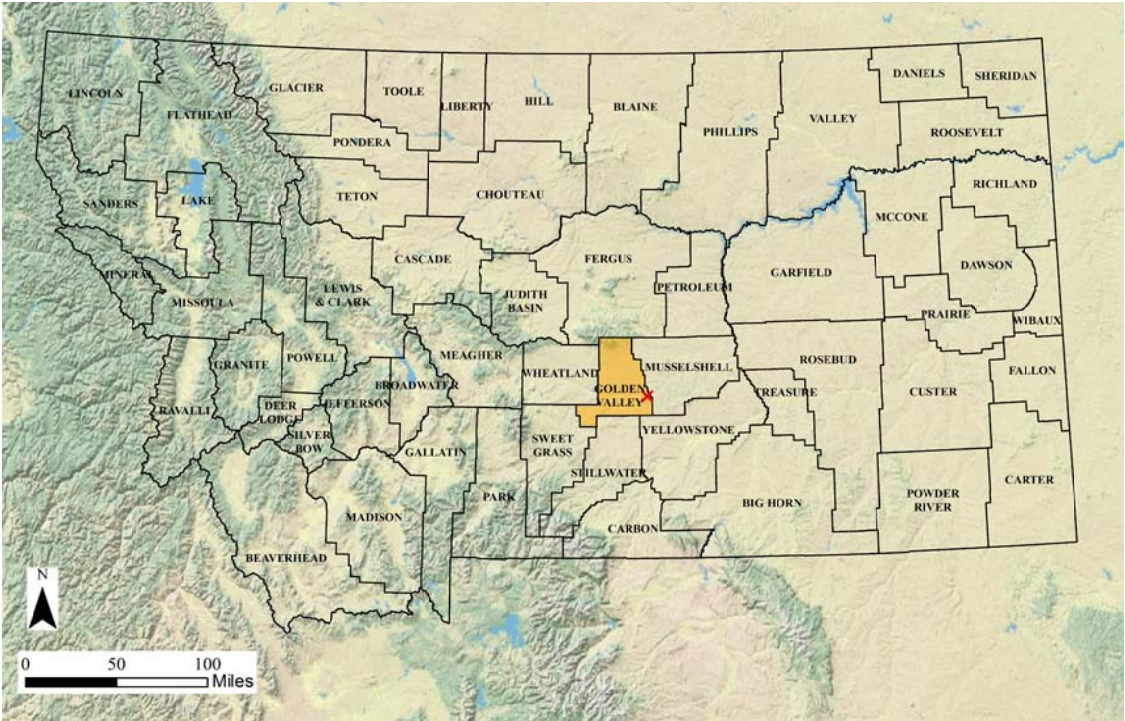
EGGE DIVERSION DAM REMOVAL, FWP #14-38

Dam Removal and Site Reclamation on the Musselshell River

LOCATED IN SECTION 9, TOWNSHIP 6N, RANGE 23E
IN GOLDEN VALLEY COUNTY, MONTANA
LATITUDE = 46.285600, LONGITUDE = -108.843100
PROJECT SPONSOR: MONTANA DEPARTMENT OF FISH WILDLIFE AND PARKS

JULY 11TH, 2014

SET NO. _____



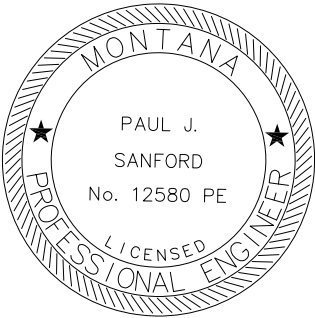
VICINITY MAP

SHEET INDEX

| SHEET NO. | DESCRIPTION |
|-----------|--|
| 1 | COVER |
| 2 | SURVEY CONTROL AND EXISTING CONDITIONS |
| 3 | PROJECT OVERVIEW |
| 4 | DESIGN PLAN |
| 5 | DETAILS |
| 6 | DETAILS |
| 7 | CROSS-SECTIONS |
| 8 | CROSS-SECTIONS |
| 9 | BEST MANAGEMENT PRACTICES PLAN |
| 10 | CONTROL OF WATER OVERVIEW |

32 DISCOVERY DRIVE
BOZEMAN, MT 59718
PHONE (406) 582-0221
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www.alliedengineering.com

Civil Engineering
Geotechnical Engineering
Land Surveying

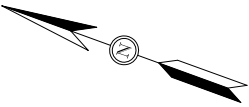


PROJECT MANAGER: PAUL SANFORD, PE
DESIGN ENGINEER: JENNIFER JOHNSON, EI

CONSTRUCTION PLANS

| CONTROL TABLE | | | | |
|---------------|-----------|-----------|------------|-------------|
| Point # | Elevation | Northing | Easting | Description |
| 1 | 3380.60 | 742859.20 | 2134305.10 | BASE |
| 2 | 3379.76 | 742966.72 | 2134411.36 | AC CP2 |
| 3 | 3379.11 | 742819.41 | 2134666.86 | AC CP3 |

| ALIGNMENT COORDINATE TABLE | | | | |
|----------------------------|--------|------------------|------------------------|------------------------|
| Line # | Length | Direction | Start Point | End Point |
| L19 | 189.49 | N20° 05' 42.64"W | (2134686.28,742454.29) | (2134621.18,742632.24) |
| L20 | 140.81 | N24° 35' 24.41"W | (2134621.18,742632.24) | (2134562.59,742760.28) |
| L21 | 178.12 | N22° 11' 25.06"W | (2134562.59,742760.28) | (2134495.31,742925.21) |
| L22 | 163.38 | N16° 59' 27.03"W | (2134495.31,742925.21) | (2134447.57,743081.46) |
| L23 | 215.28 | N14° 35' 47.49"W | (2134447.57,743081.46) | (2134393.32,743289.79) |



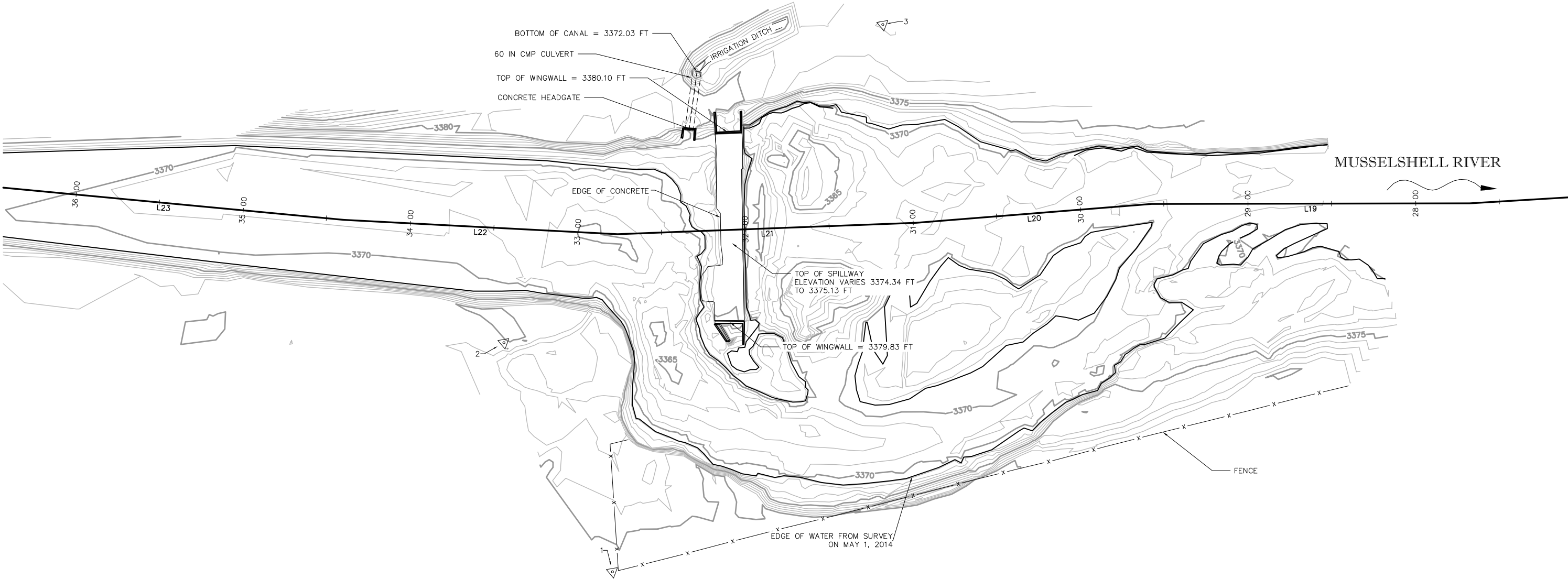
NOTES:

1. A SITE RECONNAISSANCE WAS PERFORMED BY PAUL SANFORD, PE AND JENNIFER JOHNSON, EI OF ALLIED ENGINEERING SERVICES, INC. ON MAY 1, 2014.
2. TOPOGRAPHIC SURVEY PERFORMED BY KYLE THOMPSON, LS OF ALLIED ENGINEERING SERVICES, INC. ON MAY 1, 2014.
3. BEARINGS SHOWN ARE MONTANA STATE PLANE GRID. DISTANCES ARE GRID DISTANCES IN INTERNATIONAL FEET.

HORIZONTAL DATUM: MONTANA STATE PLANE NAD 83
UNITS: INTERNATIONAL FEET

VERTICAL DATUM: NAVD 88, UNITS: U.S. SURVEY FEET

4. THE RIVER BYPASSED THE DAM DURING THE FLOODING OF 2011.
5. SCOUR AND DEPOSITION IN RIVER CHANNELS CAN CAUSE SIGNIFICANT CHANGES IN RIVERBED TOPOGRAPHY. THIS SITE WAS SURVEYED ON MAY 1, 2014 BEFORE SPRING RUNOFF. CONTOURS AND BANK LOCATIONS SHOWN ON THIS SHEET MAY NOT MATCH EXISTING CONDITIONS AT TIME OF CONSTRUCTION.



| NO. | REVISIONS | DRAWN BY | DATE |
|-----|-----------|----------|------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| | |
|----------------------------|------------------|
| 0 30 60 90 SCALE (FEET) | |
| PROJECT ENGINEER: PJS | DRAWN BY: JWJ |
| DESIGNED BY: JWJ | REVIEWED BY: PJS |

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PROJECT #: 14-043

DATE: 7/11/14

EXISTING CONDITIONS

EGGE DIVERSION
EXISTING CONDITIONS

SHEET

2

P:\2014\14-043 Musselshell River - Egge Diversion\13 CAD-Production\General\Survey Control and Existing Conditions.dwg